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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
|-----------------|-------------|----------------------|---------------------|------------------|

09/914,966

09/06/2001

Larry Neil Mackey

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07/07/2008

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EXAMINER

JUSKA, CHERYL ANN

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

07/07/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

1 RECORD OF ORAL HEARING  
2 UNITED STATES PATENT AND TRADEMARK OFFICE

3  
4 BEFORE THE BOARD OF PATENT APPEALS  
5 AND INTERFERENCES

6  
7 Ex parte LARRY NEIL MACKEY,  
8 JAMES DANIEL MILLER, II,  
9 MARK RYAN RICHARDS,  
10 JOHN GERHARD MICHAEL,  
11 DAVID WILLIAM CABELL,  
12 VALERIE ANN BAILEY

13  
14 Appeal 2008-1716  
15 Application 09/914,966  
16 Technology Center 1700

17  
18  
19 Oral Hearing Held: May 14, 2008

20  
21  
22 Before CHUNG K. PAK, LINDA M. GAUDETTE, and  
23 MICHAEL P. COLAIANNI, Administrative Patent Judges  
24

25 ON BEHALF OF THE APPELLANT:  
26 C. BRANT COOK, ESQUIRE  
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33

34 ALSO PRESENT:  
35 LARRY NEIL MACKEY

1           The above-entitled matter came on for hearing on Wednesday,  
2   May 14, 2008, commencing at 9:03 a.m., at the U.S. Patent and Trademark  
3   Office, 600 Dulany Street, 9th Floor, Alexandria, Virginia, before Paula  
4   Lowery, Notary Registration No. 162073, Notary Public.

5           THE CLERK: Good morning. Calendar Number 16, Appeal  
6   Number 2008-1716, Mr. Cook.

7           JUDGE PAK: Mr. Cook.

8           MR. COOK: I have with me Mr. Mackey, the inventor on this  
9   application. If it's okay if he sits in here, it would be helpful.

10          JUDGE PAK: Sure, no problem.

11          MR. COOK: I don't know if you would permit him to explain  
12   the invention or --

13          JUDGE PAK: If you wish to do so, you could do it.

14          MR. COOK: All right.

15          JUDGE PAK: We have a court reporter, Paula Lowery. She's  
16   going to transcribe the entire hearing. A transcript will become part of the  
17   record.

18          MR. COOK: Okay, thank you.

19          JUDGE PAK: As you know, you have 20 minutes to argue  
20   your case.

21          MR. COOK: Okay.

22          JUDGE PAK: You may start any time you wish.

23          MR. COOK: If it would please the Board, may I bring up a  
24   couple of handouts for demonstration?

25          JUDGE PAK: Sure. You may approach the bench.

26          Is this information part of the record?

1 MR. COOK: It is not yet.

2 JUDGE PAK: If this is not part of the record, we would rather  
3 not look at these.

4 MR. COOK: All right. Can it be made part of the record just  
5 to help explain the invention?

6 JUDGE PAK: We don't review this case in the first instance.

7 MR. COOK: Okay.

8 JUDGE PAK: We review this case on the record. So unless it's  
9 part of the record, we would not consider any item that is not part of the  
10 record.

11 MR. COOK: Okay. These are explanations of the prior art or  
12 the standard.

13 JUDGE PAK: That, you can leave.

14 MR. COOK: Is that okay? All right.

15 The examples were like examples of prior art samples, but they  
16 would need to be submitted to the examiner beforehand?

17 JUDGE PAK: If it's not part of the record, we would not  
18 consider them.

19 MR. COOK: I'll begin with my arguments with regard to the  
20 obviousness rejection that the examiner has presented with regard to the  
21 present application.

22 One thing I would like to initially discuss, I know you all have  
23 read the claims and the application and the record. The claim is directed to a  
24 fiber comprising starch having an average fiber diameter of less than ten  
25 microns.

1           The examiner has rejected the application over a prior art  
2 reference in 1981, issued U.S. patent by Hernandez, which discusses and  
3 described making starch fibers that have a diameter of 10 to 500 microns.

4           In that reference they specifically talk about making those  
5 fibers via a coagulation bath method, which is one of the examples on the  
6 handout there, the wet sponge coagulation fluid.

7           The standard in the industry -- and this is presently available  
8 also in the advance fiber spinning technology that I put on the bottom of the  
9 handout there -- you can only basically make 64- to 110-micron-diameter  
10 fibers using a coagulation bath process.

11           What Hernandez teaches or exemplifies in the examples is  
12 making a 65-micron diameter fiber. Nowhere do they teach making less  
13 than 65, other than referring to this broad range of 10 to 500 microns in their  
14 specification.

15           We believe and argue it is impossible for one of routine skill in  
16 the art to look at Hernandez and come up with a starch-containing fiber that  
17 is less than ten microns.

18           The reasons why we believe that's the case is, one, you cannot  
19 spin fibers through Hernandez' process through a hole that is ten microns, or  
20 close to a ten-micron-diameter orifice.

21           A couple of reasons for that is there are not dies -- the  
22 technology is not out there presently, or even way back in '81, where they  
23 could actually spin a starch-containing fiber through a ten-micron orifice die  
24 to get a fiber of about ten microns or less.

25           Part of the problem is starch has granules. There are 3 to 20  
26 micron granules within their starch compositions, and you have the issue of

1 clogging the die orifices as you're trying to spin it out. So you're clogging  
2 that, and therefore, you can't go down to that low of diameter.

3 One thing that Hernandez does teach, obviously, is they use a  
4 70-micron-diameter orifice in example 1, and they spin out into a  
5 coagulation bath, and they end up with a fiber diameter, which is about  
6 equivalent to their orifice, about 65-micron diameter.

7 There's no attenuation force, no draw force, to help attenuate or  
8 lengthen and minimize the diameter of the Hernandez fiber.

9 What we're trying to argue is it's not optimum. One of ordinary  
10 skill in the art would not optimize the fiber diameter based on the Hernandez  
11 reference and any knowledge out there in the art as it is today.

12 Would it be helpful to have the inventor explain the invention?

13 JUDGE COLAIANNI: I did have a question for you before  
14 you go on. You said that Hernandez would not have been capable of making  
15 a 10- to 500-micron aperture or orifice?

16 MR. COOK: Right.

17 JUDGE COLAIANNI: Hernandez' disclosure at column 7  
18 says, "Generally, the apertures of 10 to 500 microns in diameter are  
19 preferred in order to produce fibers of the size required herein. Thus starch  
20 fibers used in the present invention have diameter widths of 10 to 500  
21 microns and would generally have lengths of from 0.1 to 3.0 millimeters."

22 MR. COOK: Correct.

23 JUDGE COLAIANNI: You're saying that's not enabling?

24 MR. COOK: Correct. The art back in '81 and even today they  
25 couldn't have equipment to spin a ten-micron or less diameter fiber. We

1 currently use, like, 300-micron-diameter orifices or 250-micron-diameter  
2 orifices to spin less than 10 microns.

3 We're spinning about 4- or 5-micron-diameter starch fibers.

4 The way we do that is via the melt blown process there on the handout.

5 As the starch melt is coming through the dye, we're hitting it  
6 with a large amount of attenuation air, which basically has the fiber coming  
7 out pretty large size as it exits the die. Then it gets attenuated down to, like,  
8 four or five microns.

9 JUDGE COLAIANNI: Do you have evidence of record as to  
10 why or how Hernandez is not enabling for having the smaller orifice size?

11 MR. COOK: Well, we have the declaration in there by Mr.  
12 Mackey also talking about the equipment is not available, the technology is  
13 not advanced enough.

14 In order to drill these ten-micron or less diameter holes in  
15 metal, the state of the art -- I went on the website for National Jet. They're a  
16 company that designs and builds dies. So they're drilling holes through here,  
17 but the minimum they show on their website is 13 microns.

18 JUDGE COLAIANNI: We did see that. That evidence was  
19 submitted in the reply brief. Was that evidence of record before the  
20 examiner?

21 MR. COOK: No, I guess it was -- well, the specific National  
22 Jet reference was not. It was only Mr. Mackey's declaration that talked  
23 about the technology is not out there.

24 JUDGE COLAIANNI: Well, according to the rules, 41.41,  
25 that's not before us then.

26 MR. COOK: Okay.

1 JUDGE COLAIANNI: It's other evidence which is not to be  
2 included in the reply brief.

3 JUDGE PAK: To prove lack of enablement, as you know,  
4 you've got to provide evidence that will show that the Hernandez patent,  
5 which he has a presumption of validity attached to it, lacks enablement. You  
6 cannot just simply say, I don't think it's going to work without any  
7 evidentiary support.

8 MR. COOK: All right. Is there anything -- the examiner relies  
9 on the result effective variable optimization of the range saying that since  
10 Hernandez teaches 10 to 500, one of ordinary skill in the art -- it would be  
11 routine for them to make it less than 10 or whatever?

12 JUDGE PAK: I think the examiner is relying on the Titanium  
13 Metals case.

14 MR. COOK: Okay.

15 JUDGE PAK: Where the prior art teaches 10 microns, and  
16 something less than 10 microns, which could include, as the examiner put it,  
17 9.9999 -- almost no difference between 10 micron -- such that you would  
18 expect from the disclosure of the prior art that one skilled in the art would be  
19 able to make something of that minute difference.

20 MR. COOK: Okay.

21 JUDGE PAK: That's the theory in the Titanium Metals case, as  
22 I'm sure you are aware.

23 MR. COOK: All right. I think one thing additional in  
24 argument here with regard to Hernandez, Hernandez explicitly teaches  
25 they're trying to replace pulp fibers and make a replacement for pulp fibers,  
26 which are generally in a five-micron-diameter range.



1           You know, ten microns is a big difference from five microns,  
2 especially when you get into the fibers and webs made from that.

3           We say in our present invention we're making less than ten-  
4 micron-diameter fibers. There's a big unexpected benefit to getting the  
5 lower closer to five-micron-diameter fibers versus the ten. I think we would  
6 mention that and argue that within the prosecution.

7           In addition, long-felt, unmet need -- you know, Hernandez  
8 reference issued in '81, and to date, except for our application, I am not  
9 aware of any starch reference or any reference out there that teaches starch  
10 fibers of less than ten microns.

11           Even the current state of the literature referencing advance fiber  
12 spinning, which was copyrighted in 1994, but a long-felt, unmet need from  
13 '81 to 1999/2000 when we filed the international application and brought  
14 this in under 371, I think that has basis to argue, you know, it hasn't been  
15 done.

16           There's no reason that would suggest that one of ordinary skill  
17 would have been taught by Hernandez to make that leap to go under ten  
18 microns.

19           JUDGE GAUDETTE: Is there any evidence of that in the  
20 record, or is it just your argument?

21           MR. COOK: Any evidence of the long-felt need? No, I don't  
22 believe I explicitly called out that it was an '81 patent and it was an unmet  
23 need or whatever.

24           I think that goes back to the whole thing of technology not  
25 being present to make the less than ten-micron-diameter fibers. You know,  
26 for 18 or 19 years nobody else has apparently been able to do that.

1 JUDGE PAK: We have no more questions.

2 MR. COOK: Would you like --

3 JUDGE PAK: Unless you think you can clear up a legal issue  
4 of non-enablement, I don't think what he's going to say would add anything  
5 to his case.

6 But if you wish to say so on the record, if you are aware of the  
7 ramification of making a statement on the record, you may do so.

8 MR. COOK: "On the record" -- explain the --

9 JUDGE PAK: "On the record" means his statement will be  
10 transcribed, which will become part of the record. Whatever he says could  
11 be used against him in the context of the prosecution and on our review.

12 MR. COOK: All right. I believe we're comfortable with him  
13 explaining or saying a few words, if you don't mind, and give us deference.

14 JUDGE PAK: You have three minutes left.

15 MR. MACKEY: I'm not a patent attorney, so I don't  
16 understand all the legal ramifications, but from a practical standpoint in the  
17 application, as we wrote it originally, I think we had language that we  
18 produce fibers preferably below five microns in diameter.

19 There seems to be some discussion about less than 10 being not  
20 well defined enough versus 10 to 500. But in terms of a practical  
21 application, 5 microns and below is really very critical for our application.

22 So if the limitation of 5 or below were acceptable to distinguish  
23 it from 10 to 500, that would be perfectly all right because that's really  
24 where the big benefit of this technology comes into play.

25 JUDGE PAK: Thank you. Anything more?

1                   MR. COOK: Would you have any suggestions with regard to  
2 continuing this prosecution?

3                   JUDGE PAK: It's up to you. We only review the case on the  
4 record.

5                   MR. COOK: All right, so the legal hurdle -- trying to say the  
6 less than ten is not out there in the art or the Titanium Metals case.

7                   JUDGE PAK: If, in fact, you are trying to prove Hernandez is  
8 not enabling, you have to provide all the necessary factual basis to  
9 demonstrate that Hernandez is not enabling.

10                  MR. COOK: Okay.

11                  JUDGE COLAIANNI: I do have one additional question:  
12 Your long-felt-need argument, was that presented in the brief?

13                  MR. COOK: I don't believe it was explicitly presented in there.  
14 It was indirectly presented by the fact that the technology is not presently  
15 available out there to make the less than ten-micron-diameter fibers.

16                  JUDGE COLAIANNI: In any event, I didn't see it. I just  
17 wanted some clarification.

18                  MR. COOK: Okay.

19                  JUDGE PAK: Thank you for coming.

20                  Whereupon, the proceedings at 9:20 a.m. were concluded.

21